

AMENDMENTS TO THE CLAIMS:

Replace the claims with the following rewritten listing:

1. (Currently Amended) Device for the detection ofA vehicle seat equipped with a seat occupancy detection device, the seat occupancy detection device comprising
a sensing layer associated to a seating surface of ~~a~~the vehicle seat, said sensing layer having at least one electrical property varying in response to a pressure and/or deformation applied to said sensing layer,
a plurality of electrodes, said electrodes being associated to said sensing layer only at a periphery of a sensing area, and
~~a control unit connected to said electrodes, said control unit comprising means being configured to select a pair of electrodes from said plurality of electrodes, for evaluating a pressure profile acting on said sensing layer by determining said determined at least one electrical property between pairs of electrodes selected from said plurality of electrodes, and evaluate a pressure profile acting on said sensing layer based on said at least one electrical property determined.~~
2. (Original) Device according to claim 1, wherein said control unit comprises means for evaluating said pressure profile using a tomography imaging method.
3. (Previously Presented) Device according to claim 1, wherein said at least one electrical property comprises the electrical impedance of said sensing layer.
4. (Previously Presented) Device according to claim 1, wherein said at least one electrical property comprises the electrical resistance or conductance of said sensing layer.
5. (Previously Presented) Device according to claim 1, wherein said sensing layer comprises a rubber material having an internal electrical impedance which varies in dependence with a deformation of the material.
6. (Previously Presented) Device according to claim 1, wherein said sensing layer comprises a foam material having an internal electrical impedance which varies in dependence with a deformation of the material.
7. (Currently Amended) A vehicle seat equipped with a seat occupancy detection device, the seat occupancy detection device comprising

a sensing layer associated to a seating surface of the vehicle seat, said sensing layer having at least one electrical property varying in response to a pressure and/or deformation applied to said sensing layer,
a plurality of electrodes, said electrodes being associated to said sensing layer only at a periphery of a sensing area, and
a control unit connected to said electrodes, said control unit being configured to select a pair of electrodes from said plurality of electrodes, determined at least one electrical property between pairs of electrodes selected from said plurality of electrodes, and evaluate a pressure profile acting on said sensing layer based on said at least one electrical property determined, Device according to claim 1, wherein said sensing layer comprises

a first carrier foil having at least one surface covered with a resistance material
a second carrier foil having at least one surface comprising a plurality of areas covered with a conductive material

said first and second carrier foil being arranged at a certain distance from each other by means of a spacer material such that said areas covered with conductive material of said second carrier foil face said coating of resistance material of said first carrier foil.

8. (Original) Device according to claim 7, wherein said resistance material is printed onto said at least one surface of said first carrier foil.
9. (Previously Presented) Device according to claim 7, wherein said conductive material is printed in said areas onto said at least one surface of said second carrier foil.
10. (Previously Presented) Device according to claim 7, wherein said spacer material comprises an adhesive, which is arranged in a plurality of localized areas between said first and second carrier foil.
11. (Previously Presented) Device according to claim 7, wherein said spacer material comprises a printable adhesive, which is printed in a plurality of localized areas onto one of said carrier foils.
12. (Currently Amended) Method for the detection of seat occupancy in a vehicle seat, said the method comprising:

employing a sensing layer associated to a seating surface of ~~a~~the vehicle seat, said sensing layer having at least one electrical property varying in response to a pressure and/or deformation applied to said sensing layer, ~~said method comprising:~~

determining said at least one electrical property of said sensing layer between pairs of different locations situated only at a periphery of a sensing area, and evaluating a pressure profile acting on said sensing layer based on the determined electrical property values.

13. (Original) Method according to claim 12, wherein said step of evaluating said pressure profile uses a tomography imaging method.